Abstract

A process is described for the algorithmic discovery and preparation of biologically active chemical compounds. The process consists of the (1) production of an algorithmic library of different multicomponent reactions, starting from a library of suitable and diverse types of chemical starting materials, the (2) biological testing of that library, the (3) identification of suitable multicomponent reactions from that range of possible reactions, the (4) selection of a plurality of chemical starting materials of the types required for the identified and suitable multicomponent reactions, the (5) discovery of optimum combinations from the so constructed chemical range of those suitable multicomponent reactions by the (6) algorithmic preparation and biological testing of compounds from that library. The process is described by way of the example of the discovery of new antibiotically effective polyketoid-type compounds.